GEOTHERMAL ENERGY DEVELOPMENT OPINION IN THE COUNTY OF HAWAII

Prepared for:

The Energy Division
Hawaii Department of Planning
and Economic Development

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SMS RESEARCH

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INTRODUCTION

Hawaii's alternate energy resources offer great opportunity for achieving independence from oil imports. Hawaii is blessed with abundant energy sources including sunshine, ocean thermal opportunities, consistent wind currents, and vast geothermal fields.

Geothermal energy is one of our most important potential energy sources, and has generated controversy. Perhaps the major reason for this is that development potential is centered on a relatively small geographic area, the Puna District in the County of Hawaii. It is expected that the primary benefits of geothermal development--and its major dis-benefits--will accrue to the residents of the Big Island and to Puna residents in particular.

Geothermal issues over the last several years have been prominent and complex. Many have been vigorously debated, with participants taking strong stands. One plan will involve a new set of issues. The development of an undersea cable for exporting Big Island geothermal electrical power will involve a wider group of citizens, with benefits and dis-benefits falling unequally to residents of different counties. One early scenario suggests geothermal power production facilities in the Puna area with a capacity of 500 megawatts or more of electrical energy. Power not consumed by Big Island residents and businesses would be transmitted to Oahu via an undersea power cable. There are technical problems to be solved before the idea becomes a reality, but the overall benefit of the technology would be vast by any standards.

In planning for geothermal development, both the Hawaii County Planning Department and DPED have consistently sought input from the people of Hawaii. In addition to the public forum provided by the State Plan process and the public hearings on specific issues of geothermal development, both agencies have relied on scientific public opinion surveys to measure peoples' preferences.

The State Plan surveys[1] have collected public opinion on alternative energy development (including geothermal) for many years. In 1982, the County of Hawaii conducted a public opinion survey on geothermal development issues in the Puna area[2] to measure sentiment at the heart of the geothermal development region.

As inter-island cable development planning proceeds, the County of Hawaii and DPED have again sought to tap public sentiment on the issues. This report covers a survey conducted during August 1986 among residents of the County of Hawaii. The research had the following objectives:

- To measure public opinion in the County of Hawaii relevant to geothermal development for electrical power supplied to Big Island residents only;
- To measure public opinion in the County of Hawaii relevant to geothermal development of electricity to be exported for use on Oahu.
- To identify barriers to and opportunities for energy conservation programs including geothermal development.

This document presents the findings of that research.

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[1] Hawaii State Plan Survey, 1976, 1980, 1984, conducted for the Hawaii Department of Planning and Economic Development by SMS Research, Inc.

[2] That survey was conducted by SMS Research at the request of the Planning Department, County of Hawaii.

METHOD

A telephone survey of a sample of 227 Big Island residents was conducted during the first week of August, 1986. The sample was drawn so that two subgroups of residents, those from the Puna District and those for the remainder of the County, were represented with equal precision. A total of 103 interviews was completed in the Puna District and 124 interviews were completed in the rest of the Big Island. A detailed description of the methods used to conduct the survey are included in the appendix to this report.

FINDINGS

All findings reported here are taken directly from the data collected in the Big Island Geothermal Opinion Survey.

Small-Scale Geothermal Development

The initial questions asked Big Island residents for their opinion on development of geothermal resources on a relatively small scale. The benchmark for this option was a statement made by the Hawaiian Electric Light Company describing the basic Big Island power requirements for the year 1990. The survey item was intended to describe a starting point for considering geothermal development. The exact wording of the item and the responses of Big Island residents are presented in Table 1.

Table 1
Public Opinion on Small-Scale Geothermal Electricity Development
for Use by Big Island Residents and Businesses Only

The Hawaiian Electric Light Company (HELCO) says that by 1990, the Big Island will need a power plant that produces about 25 megawatts of electricity just to fill the needs of Big Island families and businesses. The needed electricity would be produced by building two geothermal plants on 12 acres near the existing geothermal power plant in the Kapoho area. Are you generally in favor or opposed to the idea of producing geothermal electricity in Puna for use by Big Island families and businesses?

Opinion	Puna Residents		Other Big Island Residents		Total Responding	
	Number	Percent	Number	Percent	Number	Percent
In favor	68	66.0	79	63.7	147	64.8
Opposed	18	17.5	10	8.1	28	12.3
Depends	14	13.6	29	23.4	43	18.9
DK/Refused	3	2.9	6	4.8	9	4.0
Total	103	100.0	124	100.0	227	100.0

Big Island Public Opinion

The residents of the County of Hawaii favor the development of geothermal energy by more than a three-to-one margin over those who oppose it. The percentage of support in the Puna District is about the same as elsewhere in the County, and opposition is a bit less in Puna than in other areas. Puna residents were more likely to say that their support for development depended on how the development was done.

Support for geothermal development in Puna is somewhat higher than it was in 1982.[3] The earlier study showed that only 48 percent of Puna residents were in favor of geothermal electric power development, 22 percent were opposed, 12 percent said it depended on how the development was done, and 18 percent had no opinion. The last four years have afforded Puna residents ample opportunity to take sides on the issue, and it is clear that more of them are currently in favor of some form of development in the area.

Reasons for Opinion

The reasons for favoring geothermal development were roughly the same for both Puna residents and those outside the area (See Table A-1 in appendix). The major reasons were economic (33%), and included the need to reduce the dependency of the Big Island on imported oil (11.6%); the perception that geothermal development would be good for the local economy and create some jobs (10.2%); and the persistent belief that geothermal development would reduce or stabilize the cost of electricity to the local consumer (10.2%). The second set of reasons reflects the general popularity of alternate energy development (39%), and included the perception that additional energy was needed on the Big Island (16.3%), and that geothermal capability existed in the County of Hawaii and should not be wasted (23.1%). A complete listing of verbatim responses to all survey items is included in the appendix to this report.

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3 The Puna Community Survey, Vol II, Prepared by SMS Research, Inc., for Hawaii-Department of Planning and Economic Development and the County of Hawaii Department of Planning, April 1982. p. 98.

An unexpected finding was that about 11 percent of the respondents favored geothermal development because it was environmentally sound. Geothermal power was thought to be clean (by comparison to burning fossil fuels or building nuclear power plants), and did not cause harm to the immediate environment around steam wells.

Opposition to geothermal development was largely based on concern for the environment. More than 60 percent of those who opposed development said their opposition stemmed from concern over the impact of geothermal operations on people who live in the area, impact on nearby flora and fauna, and general environmental degradation due to noise, odor, and unsightly equipment.

Minorities opposed development because it was not needed, it would produce jobs that would be given to people other than Puna residents, and could result in higher utility bills if development costs were passed to ratepayers.

Those respondents who said their decision would depend on how the development was accomplished were also primarily interested in the impact on environment. They differed from the opposition in that they felt that geothermal power could be managed without serious damage to the environment, but were not certain that it would be so developed. These people also made it clear that those who had not made up their minds were wrestling with the basic question, "Can the economic benefits of geothermal development be realized without serious damage to the health of the people and the life of the land?"

Large-Scale Geothermal Development

The next question asked respondents if they favored or opposed large-scale geothermal development on the Big island. The basis for the item assumed that geothermal plants could be constructed to cover 100 percent of Big Island energy needs over the next several decades. The plants would be much larger, and at least some of them would be located in the Puna Forest. The survey item and the opinion of Big Island respondents are presented in Table 2.

Table 2
Public Opinion on Large-Scale Geothermal Electricity Development
for Use by Big Island Residents and Businesses Only

Another plan would end up producing all Big Island power from geothermal wells. To do that would require about 100 megawatts of electricity. That would mean building several geothermal power plants on about 200 acres in the Kapoho area, and further up in the Puna Forest. Are you in favor or opposed to the idea of producing geothermal electricity in Puna to produce all the power used by Big Island families and businesses?

Opinion	Puna Residents		Other Big Island Residents		Total Responding	
	Number	Percent	Number	Percent	Number	Percent
In favor	44	42.7	62	50.0	106	46.7
Opposed	30	29.1	23	18.5	53	23.3
Depends	24	23.3	29	23.3	53	23.3
DK/Refused	5	4.9	10	8.2	15	6.7
Total	103	100.0	124	100.0	227	100.0

Big Island Public Opinion

Support for this proposition exceeded opposition by a two-to-one margin, but overall support did not exceed 50 percent of the people. In addition, the level of support in the Puna District dropped off and opposition got stronger. Support in the remainder of the County remained at 50 percent.

Reasons for Opinion

The motivation behind the support for geothermal development also changed to some extent. Overall, there were still two major sets of reasons for favoring development -- economic well-being and the desire to fill energy needs by using alternate forms of energy to produce electricity. There were also a substantial minority who felt that geothermal power was preferable because it was environmentally sound.

But the pattern of reasons showed some differences for Puna and other Big Island residents. On the alternate energy items, the percentages of supporters remained about the same. Puna residents, however, were less likely to favor geothermal development for economic reasons. The pattern of responses for those who opposed the development suggests that some residents who favored small-scale development for economic reasons, shifted to opposition based on environmental concerns. This phenomenon supports the conclusion from the small-scale development results that most residents understand both the economic and environmental impacts of geothermal development. It also suggests the rational conclusion that those who live nearer the rift zone are more likely to be affected by environmental hazards than those in other districts, and are those who are less likely to support large-scale development. It is interesting to note, therefore, that support of large-scale geothermal power development in Puna outnumbered the opposition 43 percent to 29 percent.

Geothermal Development for Exporting Energy

The final option placed before the Big Island residents was a very large scale development intended to produce sufficient power to export to Oahu. It was explained that the development would require at least two sites, very many wells, and hundreds of acres of land. It was specifically stated that a major part of the development would occur in the Puna Forest Reserve. The question wording and survey results are shown in Table 3.

Big Island Public Opinion

Overall support for the export proposition was only slightly higher than opposition. In Puna, supporters and the opposition were about equal in number, and across the county the undecided responses reached 21 percent of the population. While a slight plurality still favors development, there is clearly a large amount of concern over development at this level. Furthermore, large scale development draws the sharpest distinctions between public opinion in Puna and other areas of the County of Hawaii.

Table 3
Public Opinion on Large-Scale Geothermal Electricity Development
for Export to Oahu

The Big Island could produce geothermal electricity to send to Oahu by an undersea cable. Work might begin in the late 1990s and be up to 500 megawatt capacity after the turn of the century. At least two geothermal sites would be needed, each on several hundred acres. One might be in the Kapoho area, the other in the Puna Forest Reserve. In general, would you say you favor or oppose the idea of the Big Island making enough electricity to send to Oahu?

	Puna Residents		Other Big Island Residents		Total Responding	
Opinion	Number	Percent	Number	Percent	Number	Percent
In favor	38	36.9	52	41.9	90	39.6
Opposed	37	35.9	35	28.2	72	31.7
Depends	22	21.4	25	20.2	47	20.7
DK/Refused	6	5.8	12	9.7	18	7.9
Total	103	100.0	124	100.0	227	100.0

Reasons for Opinion

The reasons behind resident opinion changed substantially for the large scale development scenario. The major change was the addition of some concern over sharing Big Island resources with residents of other islands.

Reasons for favoring the proposal were still dominated by the economic benefits of geothermal development. In fact, many of those who favored the idea felt that the scale of the proposed plant was large enough to create some significant job opportunities and CIP budgets. The other major reason was that it provided the opportunity to share resources with Oahu residents. "This is Hawaii Nei," one respondent told us, "and we share."

But for every generous respondent there were almost two who felt that the Big Island resources should be kept at home and Oahu could solve its own problems. Unwillingness to share resources was, in fact, the most common reasons for opposition to the proposal. It even topped environmental concern in the

Puna area. A review of the verbatim comments suggests that the issues are never as clear cut as we are suggesting here. In other words, there are indications that unwillingness to share resources with Oahu may indeed be prompted by environmental concerns. Some people feel strongly about environmental hazards of geothermal development and are less willing to bear the discomfort for people who are not their neighbors. Nevertheless, Big Island residents, and especially those from Puna, are not likely to respond favorably to geothermal development as an opportunity to share things with their brothers on Oahu.

CONCLUSION

The residents of the County of Hawaii are generally in favor of some form of geothermal development. Supporters outnumber those who oppose development by more than a three-to-one margin. Support for developing geothermal energy resources was strong in the Puna District than in the rest of the County. This level of support represents an increase in popular support for geothermal development since the 1982 study.

Support for large-scale development (100 megawatts vs 25 megawatts), drops off to a two-to-one margin over the opposition. Support was strong in all areas, but decreased significantly in the Puna District.

A proposal for a very large scale (500 megawatts) development for producing power for export to Oahu drew much less support. Although a small plurality were in favor of the idea, the opposition increased in strength, especially in the Puna area.

The reasons behind public opinion on the geothermal development issues were similar to those found in the 1982 study. Basically, the issues amount to a trade-off between the economic advantages and the environmental problems of geothermal development. The strong points in favor of development include a perceived need for more energy, a strong preference for alternate energy forms over petroleum, perceived benefits for the local economy and employment rates, and the possibility that development may reduce or contain utility bills. On the other hand, it appears that geothermal development will cause health problems for those who live near the wells, be hazardous to floras and fauna in the Puna Area, and create noise and odor above tolerable levels. These are oversimplified statements of the reasons behind both support and opposition for geothermal development.

When residents consider very large scale development for export to Oahu, the reasons for opinions become centered on willingness to share resources with others. Supporters feel that the ability to share with others is important, and are glad for the opportunity to be of assistance. The opposition feels

it is best for some Big Island problems and let Oahu find its own solutions. The "not in my back yard" syndrome seems to have given way to a "Let's keep it home" philosophy. We note that there were a few people in the Puna area who felt that power generated from geothermal wells should be used in Puna and not shared with other areas of the Big Island.

APPENDIX

METHOD

This section describes the methods employed by SMS Research to conduct a study of Hawaii County resident attitudes toward geothermal development on the Island of Hawaii.

Survey Instrument

SMS Research designed a survey instrument in consultation with the Hawaii Department of Planning and Economic Development Energy Division and the Planning Department of the County of Hawaii. SMS prepared a draft instrument after conversations with the principals and submitted it for approval. Some minor changes were made and the second draft was resubmitted to the principals. The second draft was approved. The instrument was then pretested to ensure that it could be administered smoothly, that is was clearly understood, and that it covered the required data. A copy of the final survey instrument is included in the appendix to this report.

Sample

The population for this study was all adult residents of the County of Hawaii residing in non-institutionalized housing units at the time of the survey. The sample frame was defined as all adult residents (persons 18 years of age or older) of the County of Hawaii residing in non-institutionalized housing units and having working telephone service.

The method used to draw the sample was Random Digit Dialing (RDD). This method was adapted specifically for telephone surveys and provides the most accurate and economic way of sampling from a modern population. RDD begins with a discrete listing of all working telephone numbers in the sample area. From these numbers, commercial, government, and other non-residential numbers are excluded. The resulting list of all telephone numbers assigned to residences becomes the sampling frame for the RDD sample. In practice, such a list would change from one day to the next, and thus no accurate list is likely to be available on the day that fielding of the survey begins. This problem is overcome by the use of a computer algorithm which randomly generates telephone numbers within the range of all valid numbers for the given area.

For this survey, the overall sampling design was disproportionate stratified sampling for two areas: the Puna District and the remainder of the County of Hawaii. The disproportionate design was adopted in order to obtain samples with equal precision estimates for both areas. The precision was established by the Energy Division as plus-or-minus ten percentage points at the 95 percent confidence level. The actual sample covered in this research is slightly more precise than that estimate. The stratification system was by telephone exchange

within geographic areas. The total sample size for this study was 227: 103 completed questionnaires from the Puna District and 124 from the remainder of the County of Hawaii.

Fielding

All field work was governed by standard SMS Research quality control methods, designed to ensure quality and accuracy in resulting data. Interviewers used for the survey were experienced SMS Research staff members highly skilled in conducting telephone interviews. Each interviewer attended a comprehensive training session held specifically for this study. The training session covered telephone interviewing techniques and an item-by-item review of the survey instrument.

All calls were placed from the SMS calling center. The calling center supervisor monitored each call, observing 100 percent of the interviews completed. Calling for this survey began on August 1 and was completed by August 2, 1986. Interviewing hours for August 1 were from 4:00 p.m. to 9:00 p.m. Because August 2 fell on a weekend, so calls were placed between 10:a.m. and 6:00 p.m.

An initial call was made to each number produced by the SMS Research RDD sampling algorithm. If necessary, that call was followed by one to two additional attempts to contact an eligible respondent in the sample household. To maximize the possibility of reaching eligible respondents, call-backs were made to each non-answering, busy, or eligible-respondent-not-in number at times that were at least two hours different from the previous times.

Table M-1 on the following page documents the final disposition of all calls made in this survey.

Editing, Coding, and Data Processing

Completed questionnaires were edited and coded by SMS professional editing staff. Each survey instrument was checked for completeness, proper observance of instructions, internal logic, and clarity of each response. Appropriate codes were developed for questions that allowed for open-ended responses.

Edited and coded data from each questionnaire were entered to disk files that served as the basis for processing of computer tabulations and analysis. All entered data were 100 percent key verified. In addition, SMS used a software package specifically written to detect any logic and/or keypunch errors. Analysis runs were then produced from the "clean" data and submitted to the research staff for analysis.

Table M-1
Geothermal Survey Call Record Analysis

	Puna		Big Island		Total	
	No	Pct	No	Pct	No	Pct
Total Calls Attempted	367	100.0	535	100	902	100
Not part of the target population	91	25.1	186	35.3	277	31.2
Not in Service	71	19.3	124	23.2	195	21.6
Not a Residence	19	5.2	60	11.2	79	8.8
No Residents	1	.6	2	.9	3	.8
Target Population	276	100.0	351	100	628	100
Non-Contacts	139	50.3	173	49.6	312	49.9
No Answer	103	37.3	127	36.4	230	36.8
Busy	5	1.8	6	1.7	11	1.8
No Eligible Resp. here	31	11.2	40	11.5	71	11.4
Total Contacts	137	100.0	176	100.0	313	100.0
Non Interviews	34	25.1	52	29.5	86	27.5
Foreign Speaking	2	1.5	1	.6	3	1.0
Refusal	28	20.4	41	23.3	69	22.0
*Other	4	2.9	10	5.7	14	4.5
Completed Interviews	103	60.9	124	56.9	227	58.7

*Other category includes: Physically disabled, does not comprehend, and claims already did survey.

ADDITIONAL TABULATIONS

Table A-1
Reason for Opinion on Small-Scale Geothermal Electricity Development
for Use by Big Island Residents and Businesses Only

The Hawaiian Electric Light Company (HELCO) says that by 1990, the Big Island will need a power plant that produces about 25 megawatts of electricity just to fill the needs of Big Island families and businesses. The needed electricity would be produced by building two geothermal plants on 12 acres near the existing geothermal power plant in the Kapoho area. Are you generally in favor or opposed to the idea of producing geothermal electricity in Puna for use by Big Island families and businesses?

	Total Responding		Puna Residents		Other Big Island Residents	
Opinion	Num	Pct	Num	Pct	Num	Pct
In Favor	147	64.8	68	66.0	79	63.7
Opposed	28	12.3	18	17.5	10	8.1
Depends	43	18.9	14	13.6	29	23.4
DK/Refused	9	4.0	3	2.9	6	4.8
Total	227	100.0	103	100.0	124	100.0
Reason for Favoring:						
Favor alternate energy	34	23.1	16	23.5	18	22.8
Need for energy	24	16.3	12	17.6	12	15.2
Reduce oil dependency	17	11.6	4	5.9	13	16.5
Environmental	16	10.9	7	10.3	9	11.4
Jobs and economy	15	10.2	6	8.8	9	11.4
Cost considerations	15	10.2	5	7.4	10	12.7
Other	14	9.5	10	14.7	4	5.1
No response	12	8.2	8	11.8	4	5.1
Reason for Opposition:						
Environmental	16	57.1	11	61.1	5	50.0
Need for energy	4	14.3	0	0.0	4	40.0
Cost considerations	2	7.1	1	5.6	1	10.0
Jobs & economy	1	3.6	1	5.6	0	0.0
Reduce oil dependency	0	0.0	0	0.0	0	0.0
Favor alternate energy	0	0.0	0	0.0	0	0.0
Other	3	10.7	3	16.7	0	0.0
No Response	2	7.1	2	11.1	0	0.0
Decision depends on:						
Environmental	21	48.8	7	50.0	14	48.3
Cost considerations	11	25.6	3	21.4	8	27.6
Jobs & economy	1	2.3	1	7.1	0	0.0
Reduce oil dependency	1	2.3	0	0.0	1	3.4
Need for Energy	1	2.3	0	0.0	0	0.0
Favor alternate energy	0	0.0	0	0.0	0	0.0
Other	6	14.0	2	14.3	4	13.8
No Response	2	4.7	1	7.1	1	3.4

Table A-2

Reason for Opinion on Large-Scale Geothermal Electricity Development for Use by Big Island Residents and Businesses Only

Another plan would end up producing all Big Island power from geothermal wells. To do that would require about 100 megawatts of electricity. That would mean building several geothermal power plants on about 200 acres in the Kapoho area, and further up in the Puna Forest. Are you in favor or opposed to the idea of producing geothermal electricity in Puna to produce all the power used by Big Island families and businesses?

	Total Responding		Puna Residents		Other Big Island Residents	
Opinion	Num	Pct	Num	Pct	Num	Pct
In Favor	106	46.7	44	42.7	62	50.0
Opposed	53	23.3	30	29.1	23	18.5
Depends	53	23.3	24	23.3	29	23.4
DK/Refused	15	6.6	5	4.9	10	8.1
Total	227	100.0	103	100.0	124	100.0
Reason for Favoring:						
Favor alternate energy	12	11.3	5	11.4	7	11.3
Need for energy	16	15.1	8	18.2	8	12.9
Reduce oil dependency	17	16.0	4	9.1	13	21.0
Environmental	16	15.1	7	15.9	9	14.5
Jobs and economy	15	14.2	6	13.6	9	14.5
Cost considerations	15	14.2	5	11.4	10	16.1
Other	13	12.3	9	20.5	4	6.5
No response	2	1.9	0	0.0	2	3.2
Reason for Opposition:						
Environmental	27	50.9	14	46.7	13	56.5
Favor alternate energy	4	7.5	3	10.0	1	4.3
Cost considerations	2	3.8	2	6.7	0	0.0
Unwillingness to share	2	3.8	2	6.7	0	0.0
Need for energy	1	1.9	0	0.0	1	4.3
Jobs & economy	1	1.9	0	0.0	1	4.3
Reduce oil dependency	0	0.0	0	0.0	0	0.0
Other	15	28.3	9	30.0	6	26.1
No Response	3	5.7	2	6.7	1	4.3
Decision depends on:						
Environmental	20	37.7	8	33.3	12	41.4
Cost considerations	8	15.1	3	12.5	5	17.2
Reduce oil dependency	3	5.7	2	8.3	1	3.4
Need for energy	3	5.7	2	8.3	1	3.4
Jobs & economy	3	5.7	1	4.2	2	6.9
Favor alternate energy	0	0.0	0	0.0	0	0.0
Other	14	26.4	7	29.2	7	24.1
No Response	2	3.8	1	4.2	1	3.4

Table A-3
Reason for Opinion on Large-Scale Geothermal Electricity Development for Export to Oahu

The Big Island could produce geothermal electricity to send to Oahu by an undersea cable. Work might begin in the late 1990s and be up to 500 megawatt capacity after the turn of the century. At least two geothermal sites would be needed--each on several hundred acres. One might be in the Kapoho area, the other in the Puna Forest Reserve. In general, would you say you favor or oppose the idea of the Big Island making enough electricity to send to Oahu?

	Total Responding		Puna Residents		Other Big Island Residents	
Opinion	Num	Pct	Num	Pct	Num	Pct
In Favor	90	39.6	38	36.9	52	41.9
Opposed	72	31.7	37	35.9	35	28.2
Depends	47	20.7	22	21.4	25	20.2
DK/Refused	18	7.9	6	5.8	12	9.7
Total	227	100.0	103	100.0	124	100.0
Reason for Favoring:						
Jobs and economy	23	25.6	8	21.1	15	28.8
Share resources	19	21.1	11	28.9	8	15.4
Favor alternate energy	11	12.2	4	10.5	7	13.5
Cost considerations	11	12.2	3	7.9	8	15.4
Environmental	7	7.8	4	10.5	3	5.8
Reduce oil dependency	5	5.6	1	2.6	4	7.7
Need for energy	4	4.4	1	2.6	3	5.5
Other	10	11.1	6	15.8	4	7.7
No response	0	0.0	0	0.0	0	0.0
Reason for Opposition:						
Unwillingness to share	30	41.7	17	45.9	13	37.1
Environmental	26	36.1	12	32.4	14	40.0
Cost considerations	4	5.6	4	10.8	0	0.0
Favor alternate energy	4	5.6	0	0.0	4	11.4
Jobs & economy	1	1.4	1	2.7		0.0
Need for energy	1	1.4	0	0.0		0.0
Reduce oil dependency	0	0.0		0.0		0.0
Other	6	8.3	3	8.1	3	8.6
No Response	0	0.0	0	0.0	0	0.0
Decision depends on:						
Environmental	17	36.2	6	27.3	11	44.0
Cost considerations	10	21.3	5	22.7	5	20.0
Sharing resources	6	12.8	1	4.5	5	20.0
Jobs & economy	5	10.6	2	9.1	3	12.0
Reduce oil dependency	0	0.0	0	0.0	0	0.0
Favor alternate energy	0	0.0	0	0.0	0	0.0
Need for energy	0	0.0	0	0.0	0	0.0
Other	9	19.1	8	36.4	1	4.0
No Response	0	0.0	0	0.0	0	0.0

SURVEY INSTRUMENT

Name: _____	**BIG ISLAND GEOTHERMAL**	I.D. No.: _____
Date: _____	SMS Research, Inc. August 1986	Phone: _____
		Day: M T W T F S S
		Contact No.: 1 2 3 4

Hello, I'm _____ from SMS Research, a Honolulu survey company. We're doing a short survey on the Big Island for the County of Hawaii.

Are you the head of household? (IF HEAD NOT AVAILABLE, SPEAK TO SPOUSE. IF SPOUSE NOT AVAILABLE, SPEAK TO PERSON 18 OR OLDER IN HOUSEHOLD. CIRCLE PERSON INTERVIEWED BELOW.)

head 1
spouse 2
other. 3

A. GEOTHERMAL ENERGY

1. The Hawaiian Electric Light Company (HELCO) says that by 1990, the Big Island will need a power plant that produces about 25 megawatts[1] of electricity just to fill the needs of Big Island families and businesses. The needed electricity would be produced by building two geothermal plants on 12 acres near the existing geothermal power plant in the Kapoho area. Are you generally in favor or opposed to the idea of producing geothermal electricity in Puna for use by Big Island families and businesses?

in favor . . . . . 1 → GO TO Q.1A
opposed. . . . . 2 → GO TO Q.1B
depends. . . . . 3 → GO TO Q.1C
refused to answer. . . . . 9 → GO TO Q.2

1a. Why is that?

_____

_____

FOR OFFICE USE ONLY

1b. Why is that?

_____

_____

FOR OFFICE USE ONLY

1c. Depends on what?

_____

_____

FOR OFFICE USE ONLY

1 [IF RESPONDENT ASKS: A MEGAWATT is enough electricity to take care of 1,000 homes on the Big Island.

2. Another plan would end up producing all Big Island power from geothermal wells. To do that would require about 100 megawatts of electricity. That would mean building several geothermal power plants on about 200 acres in the Kapoho area, and further up in the Puna Forest. Are you in favor or opposed to the idea of producing geothermal electricity in Puna to produce all the power used by Big Island families and businesses?

GO TO Q.2A	in favor 1
GO TO Q.2B	opposed. 2
GO TO Q.2C	depends. 3
	refused to answer. 9
GO TO Q.3	

2a. Why is that?

FOR OFFICE USE ONLY

2b. Why is that?

FOR OFFICE USE ONLY

2c. Depends on what?

FOR OFFICE USE ONLY

3. The Big Island could produce geothermal electricity to send to Oahu by an undersea cable. Work might begin in the late 1990s and be up to 500 megawatt capacity after the turn of the century. At least two geothermal sites would be needed--each on several hundred acres. One might be in the Kapoho area, the other in the Puna Forest Reserve. In general, would you say you favor or oppose the idea of the Big Island making enough electricity to send to Oahu?

GO TO Q.3A	in favor 1
GO TO Q.3B	opposed. 2
GO TO Q.3C	depends. 3
	refused to answer. 9
	GO TO Q.4

3a. Why is that?

FOR OFFICE USE ONLY

3b. Why is that?

FOR OFFICE USE ONLY

3c. Depends on what?

FOR OFFICE USE ONLY

B. DEMOGRAPHICS — Now I have a few questions for statistical purposes:

4. How long have you lived on the Big Island?

- less than one 1
- one to six 2
- seven to twenty 3
- more than twenty/not whole life . . 4
- lifetime 5
- refused 9

5. Including yourself, how many persons live in this household? ☐☐

6. How many people in this household are less than 18 years old? ☐☐

7. Do you own or rent your home?

- own 1
- rent 2
- occupied without payment 3
- refused 9

8. What is your current marital status?

- single, never married 1
- now married 2
- divorced, separated, widowed . . . 3
- refused 9

9. What is your ethnic background?

- Caucasian 1
- Chinese 2
- Filipino 3
- Hawaiian/part Hawaiian 4
- Japanese 5
- mixed/not Hawaiian 6
- other 7
- don't know/refused 9

10. What is your age?

- less than 25 1
- 25 to 34 2
- 35 to 44 3
- 45 to 54 4
- 55 to 64 5
- 65 or older 6
- refused 9

11. And what was the total 1985 income -- before taxes -- of all the people in your household? Was it. . .

- less than $10,000 1
- $10,000 to $19,999 2
- $20,000 to $29,999 3
- $30,000 to $39,999 4
- $40,000 to $49,999 5
- $50,000 to $75,000 6
- more than $75,000 7
- refused/don't know 9

12. [INTERVIEWER: RECORD, NO NOT ASK]

- male 1
- female 2

VERBATIM CONTENTS

VERBATIM RESPONSES

VERBATIM CONTENTS

VERBATIM RESPONSES

RESPONDENTS FROM AREAS OTHER THAN THE PUNA DISTRICT

GEOTHERMAL ELECTRICITY FOR BIG ISLAND ONLY (25 MEGAWATTS)

The Hawaiian Electric Light company (HELCO) says that by 1990, the Big Islandwill need a power plant that produces about 25 megawatts of electricity just to fill the needs of Big Islandfamilies and businesses. The needed electricity would be produced by building two geothermal plants on 12 acres near the existing geothermal power plant in the Kapoho area. Are you generally in favor or opposed to the idea of producing geothermal electricity in Puna for use by Big Islandfamilies and businesses?

In Favor

1. Need: Because we need (more) energy/electricity:[1]

   I just feel we need it.

   I think we should have all the power we can use.

   It's needed for the increasing power need.

   Some people don't even have electricity. Many only have generators.

   The existing facilities aren't adequate anymore, and they do need to build something.

   We need the energy and it's a safe way to produce electricity

   We need power. There's no other way.

   We need it.

   We need it -- for energy and for save our other energy, and that's (geothermal development) one way to get it.

   We need the energy that it provides, and the plants we have now are currently not being used properly.

   Well, we need the electricity and geothermal would probably be cheaper.

2. Alternate Energy: Because we should use our resources:

   Hawaii has the land for it. That would be a good use of the (geothermal) power over there.

   The people are going up. The population is going up. More people are coming, and we need power.

---

[1] This comment generally repeats the format of the initial question, and should be considered a weak response to the question.

There is a need. That (geothermal) energy is readily available and I think we should use it.

Because it will benefit the people by using a local natural source.

I think we should make use of that resource.

I don't live around there (Puna District) - but even so I would be in favor. It's there so why not use it.

I think we could use it. We need to start looking at alternatives (to traditional power plants).

I just think it's better. Natural.

I'm in favor of progress and using another energy source.

If we can go to natural resources we have an ability to be self sufficient. We need to do this.

It is natural energy, it is an alternate form of energy.

It's an alternative source of energy. It's here and it should be utilized.

It's a pretty good way to generate electricity.

We ought to make use of what nature has to offer.

Hawaii might as well use the resources of the earth.

I'm only for use by the Big Islandbut not for Oahu. We need it here. I think it's a relatively non-polluting type of energy. I lived in New Zealand and Indonesia and they are starting to use it there. It seems to work okay in other places. Also it's a natural and renewable energy source

We need an alternate energy source.

We have a natural resource and we should make use of it. It won't affect the volcano in any way and we do need the power.

3. Oil: To decrease petroleum dependency:

Because we have the natural resource and we should go ahead and use it and stop buying oil.

I don't know much about it, but we wouldn't have to depend on other countries and that's good.

The electricity would be cheaper. We would not be dependent on some god damn Arabs.

If we need it, I'd rather do it that way than diesel.

I hope that it will be immediately impactful. It would reduce our dependence on oil and other resources.

In the long run, the prices of oil will keep going up.

It will be an alternative to gas and fuel that is used now.

It would be cheaper. And it would take us away from imported oil, more jobs for locals.

It's for the betterment of the county so we won't have to worry about getting oil any more.

It's a better alternative to oil produced (energy).

Because it's better than burning diesel and other fuels. Geothermal is a practical form of energy derivation, that would mean less pollution and more efficiency.

Because it's better than fuel oil. I'm opposed to the federal law that requires the cost of electricity to be equivalent to the cost of burning oil to produce electricity.

Right now the prices of oil are pretty high we have the geothermal right here.

We need something that's independent, so we don't have to depend on oil producing nations.

We need alternate sources of energy; oil is not going to last forever.

4. Cost

Because it will lower electric rates.

It's a natural resource and we may as well go ahead and use it. Anything that will lower the price of utilities is welcome.

I think if it helps decrease the cost of electric bills of consumers, then we should go ahead and use it.

It would cut energy costs. My bills are going up and I would like it to come down.

I think the cost would come down by using it - so we'd be paying less on our electric bills then.

It would cut down the electric bill.

Well, our rates will go down. And it would create jobs and we really need jobs.

Our rates are too high now.

Because of the electrical bills will be lower than it is now.

I back it in the hope that it will reduce cost to us.

'Cause it'll be cheaper.

Must be cheaper.

Geothermal is cheaper that what we got now.

We get a cheaper price hopefully. Because i's a alternate source of energy.

I just think it would be more cheaper to produce. In my vast ignorance on this subject, it seems to me that it would be cleaner, might employ a few more people. There'd be less dependence on oil, the price of electricity might be kept relatively low, but I'm not that informed on the matter.

It would be a cheaper form of energy.

It would cut down electrical expenses.

It will save on resources and it might keep the cost down.

It might be expensive at first, but cheaper later, I think.

It's a natural energy and I think we should use it and it will probably be cheaper for us.

It'll mean low cost in long run. I've heard the talk, but I haven't seen anything to show me that it is detrimental to environment.

Sooner or later we are going to need it. It is cheaper than conventional forms.

5. Jobs and Economy: It would create jobs:

Utility prices would come low and it would create more local jobs.

I would be better to have more power. Maybe there'd be more jobs.

It brings business and jobs to the island. Which we need.

It's a start towards other sources of power and will make the Big Islandmore independent - more jobs, improve the economy here.

It's a good way to produce energy without gas or fuel - it also creates jobs.

I feel that we need to explore the new energy field (alternate energy in general), and we need it (geothermal development) to help the economy.

Maybe the business is good, yeah?!

6. The environment

That's the cleanest source of energy. No smoke, no stacks and efficient.

If it works good, I think they should go ahead and build. Some people say the smell is bad, but it doesn't bother me.

It is cleaner than atomic energy so I would favor it.

7. Other reasons

I don't care one way or another. Just say "favor."

No reasons yet. I'm just learning about it, but don't see any big problems yet.

Sounds good, but I need more information. I'm new on the island. Been here about two months now and I'm still learning about the issues.

Because we will not have to depend on the electric company anymore.

Because it is an efficient way to get power.

Opposed to Geothermal Development

4. Cost

The electric is too high now and if they build more plants, it'll go higher yet - and they can't tell me it won't.

6. Environment

Because of the sulfer coming out of the plant. It smells real bad.

Because of the health hazards.

I think they are a health hazard. I think there are other alternatives to produce the energy.

We are scared of the steam and odor and of its gigantic size.

Because I'm a stockholder of HELCO and I believe HELCO is doing everything in its capacity to provide energy now or then. I don't see any reasons for change.

7. Other: Opposition to development in general

I don't want more to be built. Can't say why.

I don't think they know what they're doing. I wouldn't mind so much if they just did it for a few families here (in Puna), but generally I'm opposed.

I don't know. I guess because so many people are opposed to it.

I'm just against it.

It Depends: (Depends on what?)

1. Need

   If it would help the electrical needs of the Big Island, I would be in favor. We should have windfarms, too, in case of emergency like volcanic eruptions over there.

2. Alternate Energy

   Well, if can get natural power it would be to our advantage. But I'd be in favor of harvesting an abundance of natural resources as opposed to ore or hydropower. Geothermal's one of those. If we don't use it, it'll go to waste.

3. Oil: Reducing oil dependency

   If the oil is expensive and hard to get, geothermal is good. OPEC is good, too, when oil's cheap.

4. Cost

   The cost of electricity rates. If it'll go lower or higher. If the cost comes down, then I'm in favor. If it goes higher, then I'm not.

   Depends on the rates if they raise them I'd oppose - if not, I'd favor it.

   If the price comes down then okay. I would be for it. We pay too much now - the price is way too high. I want the prices brought down.

   If it cut our price that would be great. I don't know how the people that live close to it feel - they might not want it - but if the smell isn't too bad I would go along with it. I want lower rates.

   Depends if it produces cheaper electricity.

   If it will make electricity cheaper, sure!

   If it will lower rates I'd be for it.

   Will it raise our rates? If it's cheaper I think might be for it.

6. Environment

   On where it is going to be built. I would want to know if it would take up agricultural area and destroy natural environs.

   Depends on the impact of what geothermal does to plants and animals in the area around the wells. I'm for it if its not harmful to the environment, and if it lowers my electric bills.

   Depends on if it's hazardous to your health. If it isn't, it would be okay with me.

I would have to find out what it would do to the land. If it would destroy it, then it wouldn't be worth it.

I'm in favor but I'm afraid of upsetting the natural environment.

I'm in favor, providing there is proper care taken regarding safety. I know there are environmental and safety hazards. Occasional well blowouts can occur but geothermal is one of the safest ways to get energy and not as polluting as others. You have to do it right, though.

Just as long as it doesn't pollute the air and cause problems.

Depends on ... can't be in a residential area because of the smell. It's a great idea: geothermal wells.

On how much it disturbs the environment.

Well, there's problems with fumes and wastes and what to do with them. I's want to know what will it do to the environment.

(It depends on) how it's done. Since I am employed as a person who hooks up the geothermal wells, I would like it. But it causes a lot of pollution and noise.

We do need some kind of energy, but if it affects the people in the area negatively, then I would be against it.

(I depends on) whether they can produce the electricity without all the fumes in the air, screwing up the environment.

It would depend on the air pollution - the smell - is it causing any health problems? I know we need it but I think it should be put where no one lives.

7. Other: More information

As long as they produce it for here and not someplace else. I've been reading about like that cable they want to put down, I don't like that.

I need more information. They don't give us enough.

If it's not going to affect the people living in the neighborhood there in Kapoho, I wouldn't mind. Would it take their land?

We need more information from them. A plant that will produce electricity, especially since fuel will be depleted. But, what little I know I favor.

GEOTHERMAL ELECTRICITY FOR BIG ISLAND ONLY (100 MEGAWATTS)

Another plan would end up producing all Big Islandpower from geothermal wells. To do that would require about 100 megawatts of electricity. That would mean building several geothermal power plants on about 200 acres in the Kapoho area, and further up in the Puna Forest. Are you in favor or opposed to the idea of producing geothermal electricity in Puna to produce all the power used by Big Islandfamilies and businesses?

In Favor

1. Need

Some people don't have electricity - many only have generators.

Because we need the power for the up and coming years.

If you need land to build it use it.

Because its important for Big Islandto have its own power and the source is already there.

Great to be able to be self supporting by using our own sources of electricity.

If it's necessary, I think so.

Good for people there may not have power.

The whole island needs the energy.

2. Alternate Energy

We have the natural resource. We should use it!

More self-sufficient.

We have the natural resource as I said and we should use it. We need to find an alternative to what we are using now.

I think we have to move with the times. The energy is there we should use it.

I guess that's the logical place because if the heat of volcano.

Yes. A couple hundred acres is not much in this area. There is plenty of space to spare. It would be very sensible to develop this resource.

We wouldn't have to rely on other sources. Would it be cheaper? That would help a lot people.

3. Oil

We have plenty of space so taking up more acres doesn't matter. Oil is finite and the geothermal energy could go on for hundreds of years.

I think there should be other ways of producing electricity besides burning oil. I think geothermal is a good way.

It's a good way to produce energy without gas or fuel - it also creates jobs.

Because we wouldn't have to use much fuel, so it would be better.

I guess it would help the island. We would have our own energy.

It's for the betterment of the county so we don't have to worry about getting oil.

Anything to get away from diesel.

I would like all the energy to be produced by something other than fuel we use now.

We need an alternate source of energy than burning oil. Oil is bound to run out one of this days.

It would make Big Islandmore self sufficient.

I don't think oil will be cheaper anymore.

For economical reasons. Someday oil may not be available.

It will be an alternative to gas and fuel that is used now.

4. Cost

Electricity is so expensive - we would all benefit. We need to develop geothermal energy.

I think it would pay for itself in the long run and we'd be better off.

It would save on expenses.

Cheaper.

I said, because it's cheaper.

Cheaper for the Big Islandfor people to use, much more economical. Sounds like a better idea - to have one power source. Its cheaper.

In the end it'll be cheaper and better for us.

I'm for it all the way. I think it will be economical all the way.

Well, maybe if we do that then the prices will go down.

5. Jobs and Economy

Open up a little more jobs for everybody.

Create jobs and will help economy.

The same reasons plus jobs. A big plant like that or several plants like that would mean jobs.

I'm in favor of progress and it's renewable energy it'll provide more jobs for local people.

We need more jobs and this might bring jobs for our children so that they would stay home.

It would produce more jobs and it would reduce our bill.

Create a lot of local jobs. A renewable form of energy.

It will conserve the other energies and will help our economy too.

It would create more local jobs and it's an efficient form of energy without much pollution.

6. Environment

As long as they have the land. Don't kick out anyone for it. Make use of it.

There will always be environmentalists saying its not good and they have a point. But, it's for a good purpose and hopefully, once its in operation the local utility company will lower their rates after the initial starting period or at least at a reasonable cost.

In my view, the power plants would be safe and would not hurt the environment.

As long as it's not hurting the environment and is spread out - not have all the wells in one area.

Puna is in need of development and exploration. So we need it.

It would centralize the impact on the environment.

It puts less particles in the air and it's cleaner.

It's a good location for it. I don't know who owns the land but if it does not cause a problem with the owner I say build it.

If it's going to be done at all I would rather see it in Kapoho or Puna rather than near the volcano national park because it would do irreparable damage to that area.

7. Other Reasons

The sooner the better.

I think it's better.

I don't know.

Build it as far as I'm concerned. I see no problems.

Opposed to Geothermal Development

1. Need

We don't need that much. The supply they have right now is sufficient.

2. Alternate Energy

It might be too much to depend on one source of power.

5. Jobs and Economy

Electricity is too high now and if they build more plants, it'll go higher yet - and they can't tell me it won't!

6. Environment

There is too much pollution and noise involved and there are residents in that area.

It would require so much land and I think they would destroy the land.

Because of the health reasons. Oil.

I just think they should concentrate on other sources such as sun and wind, which are non-polluting. I hear from the people that live down there (Puna), that it's loud and smells bad. Besides I don't think they know what they are doing anyway.

Natural landscape will be invaded and destroyed and there is no need for that.

I think they are a health hazard. I think there are other alternatives to energy.

It would take too much acreage of land that is natural. I do not want it spoiled. Other areas of geothermal activity should be explored for e.g., Kohala.

We are scared of steam and odor and it's gigantic size even on a larger scale.

That's too many wells and acreage this area will not be able to support that many.

if it means stripping the forest, I'm against it. A little bit is okay but a lot is too much.

We are going to have too much. It's going to mean big structures and big power plants and pollution.

You should just leave the nature things alone.

Too much land that they have to use I'm concerned about the damage that'll be done to the environment.

7. Other Reasons

Because I'm a stockholder of HELCO and believe HELCO is doing everything in its capacity to provide energy now or then. I don't see any reasons for change.

I think it's ridiculous! They need that much land? I don't know why they need to use so much land.

I don't know why. Maybe it's noisy I guess.

Not for clearance of the Puna Forest then you going need some land too. I think it's got to be somewhere else.

That area alone should not be responsible for the electrical output for the whole island (Kapoho, Puna).

They might need the land for something else.

It Depends: (Depends on what?)

1. Need

That we use the energy provided to a basic need. Its better than nuclear power.

We're all greedy. We want geothermal but Puna may not want the wells there. Since we're so far from Oahu, we have to find some means of power.

3. Oil

We need more information from them. But what little I know I favor a plant that will produce electricity, especially since fuel will be depleted.

4. Cost

As long as it saves on electricity and doesn't cost much.

As long as the price stays low. They have to know the price and how many kilowatts. There should be no rise in the price. I know somebody's making some money. Somebody always makes money, but the price can't go too high.

Will it cost us more? If it did I would oppose it the price is my main concern.

On the expense - if it costs more I'd oppose.

What the cost would be.

5. Jobs and Economy

Will it increase the number of jobs? Will it decrease the rates? Who will run the show - be in control? I would need to know more.

If it will better the economy then I'd go along with it.

6. Environment

I need more information first. Like whether it would be of benefit to us or not and what will it do to the area.

I don't know enough about what that many plants would do to the environment so a lot would depend on that.

We do need some kind of energy, but if it affects the people in the area negatively I would be against it.

On how much it will disturb the environment.

If the environment is not overhauled and is not disturbed too much. If it is I'm not in favor.

I like the idea but how will it affect the environment? I would want to know more before I decide.

Well, it's good if it doesn't endanger anyone or anything. If they have a proven way of handling any problems with the cable. I would not want the environment or any people or animals to be in any danger from any damage of that cable.

Depends on if it's hazardous to your health. If it isn't it would be okay.

If the people living in that area aren't bothered by the fumes, it's alright by me.

Depends on the impact of what geothermal does to plants and animals. I'm for it if it 's not harmful to the environment and lowers my electric bills.

If it's not going to affect the people living in the neighborhood there in Kapoho I wouldn't mind. Would it take their land?

What area will be used? How do those people feel? If they would not want it built by them I would have to go along with them. You have to pay attention to how the people living in that area feel. If it is okay with them and it lowers the costs fir the rest of us then I'd be for it.

7. Other Reasons

I'm in favor of some but not all. That's too many holes. Why do they need all those holes? We don't need all those holes.

I need more information. They don't give us enough.

It won't happen in my time, but as long as there is light I'm happy.

If it's on federal land, I'm in favor.

GEOTHERMAL ELECTRICITY FOR EXPORT TO OAHU (500 MEGAWATTS)

The Big Islandcould produce geothermal electricity to send to Oahu by an undersea cable. Work might begin in the late 1990s and be up to 500 megawatt capacity after the turn of the century. At least two geothermal sites would be needed--each on several hundred acres. One might be in the Kapoho area, the other in the Puna Forest Reserve. In general, would you say you favor or oppose the idea of the Big Islandmaking enough electricity to send to Oahu?

In Favor

1. Need

   If it's necessary, I think so.

   If they need the help let them have the electricity.

   Good to share with others.

2. Alternate Energy

   It's an alternate source of energy. It's here and should be utilized.

   For the same reasons. I think it's a resource that should be developed.

   We have the energy here and we might as well use it and send it to others.

   Geothermal power is here! Otherwise we'd have to ship in other sources of electricity.

   Use our energy here on the islands.

   I don't see no problem with that. The cable idea will never work, but If they think they can do it, I feel they should go ahead and tap into the energy sources.

   Better that we take advantage of what we have. They can go ahead if they need my vote.

3. Oil

   Cheaper to produce and cleaner to produce and might employ a few more people. There would be less dependence on oil, the price of electricity be kept relatively low.

   Sooner or later oil will run low and the most logical thing would be geothermal.

   If it benefits the Island of Hawaii. I am for it. We have to stop using oil for energy when gas is so available.

It's got to be gotten from somewhere. I'd much rather see us dependent on ourselves than on someone else or petroleum like that.

4. Cost

Big Islandcan get by cheaper by selling Oahu our power. We have to get a price break by doing it, though.

Well, that would be good. They need the power. The price would rise. The potential is good and the Big Islandwould benefit.

Just the cost.

If it don't cost me extra, why not.

It'll spread the cost of building the geothermal wells.

Economically better for Oahu.

It will help defray the expenses if oahu needs it we should send it and to the other islands too. It should be for the whole state.

It would help with the cost it would help pay some of the cost of buildingthe plants and we wouldn't be paying for everything ourselves.

5. Jobs and Economy

It would generate income for this island and benefit the community.

It would benefit Big Islandeconomically and besides we would help out Oahu.

More economy for the Big Islandand competitive prices for utility.

If we can produce the electricity then we'd have more jobs and I'm in favor of anything that will keep our young people here and anything that help the economy.

Create more jobs for the people in the Big Island.

Brings more income to Big Island.

Yes, the bigger it gets the better, have you any idea of the job situation here. If we can make enough electricity to provide other islands - lets do it.

Puna is scarcely populated and so development is needed and we need to put people to work.

Oahu has a bigger population than us, and by building more plants it provides jobs.

It create jobs, provides lower electric bills.

It would create more jobs. And the same reasons I said for the question before.

It would be surplus that Big Islandcannot use. So why not make money by selling it to Oahu.

It would help a lot of people with more jobs.

There would be more income to the Big Island. It's always better to be more self sufficient and we'd get more jobs here.

That would give us more money. It would mean more money for the county by the sale of the surplus power.

Benefits Honolulu and money-wise it will help the Big Island, too.

6. Environment

There's enough land out here to provide for all the islands.

Impact to the environment could be centralized if this was done and would create more economic sources of energy.

A couple hundred acres is nothing - we have the space and I can't see why the space is an issue. I'm for developing. I don't know about the cable idea though. Can they do that?

7. Other Reasons

It would be a good thing to try out. It will be the first time for a project like this so I think we should do it.

I just think it's a good idea.

I don't know.

You might as well go all the way and keep it in the one area.

8. Should Share Resources

Maybe just to help them out.

We should share our power with someone.

Because if we could support the other islands - that would be nice.

To help Oahu out on electricity.

This is Hawaii Nei. We share, so it's only brotherly.

I think since we have it we should share it.

It would help Oahu with power needs: and it would make it cheaper.

Yes. If we can find a way to carry the energy to the other islands, I would be in favor.

Opposed to Geothermal Development

1. Need

Because too much geothermal electricity is produced already.

4. Cost

If it's going to be sent by underwater cable I'm against that. Because of so much water activity. It'll cost more to fix the damages caused by the tidal waves, storms and such.

Because building that is going to cost us money.
Too much tax dollars.

I've been reading about that, and it seems like all through the years when they come up with something like that to take out we lose out somehow, and we end up with high costs.

6. Environment

Too much land that they have to use I'm concerned about the damage that'll be done to the environment.

I oppose the project because it would mean destruction of the Puna Forest Reserve and other landscape.

That's taking up too much land.

Taking too much land and because of the waste products - I don't know how much there would be or what they would do with the waste.

Because I think it would irrevocable change the Big Island. It (laying a cable) would mean condemning a section of land a quarter of a mile wide with pilons clear across the Big Island. I think Oahu would get preferential treatment.

I have property on Puna. Noise, land utilizing are a couple of reasons.

Because you waste the land and the people who live in Puna are inconvenienced by the noise.

Why Kapoho? I believe in Madam Pele. She would get mad. She won't let them use it. She would just keep on anyway.

I think the Big Islandhas a beauty that Oahu doesn't have anymore. It depends on the necessity.

Not sure about those things, don't want wells here (smells).

The volcano would blow the whole island up. Madame pele would be angry.

Because it would take too much land.

It will end up injuring those people who live in that area. It's unhealthy - let Oahu get it from somebody else!

Health hazard and other alternatives to energy.

7. Other Reasons

Same, 'cause HELCO is getting us all the power we need already.

I cannot forsee that. It is too far in time.

This too big an undertaking for Kapoho. It's not fair to the residents.

8. Shouldn't Share Resources

I think its impractical - I think it would raise our rates and we're wasting time talking about it. They don't even have a cable to get it there. We should keep it here for us we're the ones that have to pay for it.

They should keep it here for a while before sending it anywhere else.

Oahu has enough space to make their own power.

Oahu can make their own. If something goes wrong on Oahu, like a oil shortage or something, then it might go wrong in Hilo, too.

Oh, It's okay to support Hawaii. But if we support Oahu then we may have to support the others. We's end up with too many plants over here. It should be limited.

We certainly don't need to send some anywhere else.

I think Honolulu should look for other alternatives.

We might run out of power if we give it all away.

If we are not in favor of producing it for us so why should we produce it for you.

It may get out of hand.

I think Oahu should find their own source of energy. I wouldn't want to upset the environment. I think it's very selfish of Oahu to want our power.

We might run out of energy here.

We have no responsibility for Oahu.

It Depends

4. Cost

Pricing. I am in favor of it because I am behind progress. It's an alternate resource of energy for the future and cost efficient. In my mind the cost of erecting the power plants would be paid for over the long run by the sale of geothermal energy to the outside, particularly to Oahu.

Because we are looking for a cheaper alternative. They could send it anywhere if it would lower my energy bills but not at all if it won't.

I would be for it if it were at least fifty percent lower than the price they sell it in Honolulu. I think we should take care of our own back yard first.

If it's going to cut down on cost I'm for it.

If Oahu pays their bill I would favor as long as our rates are not raised.

5. Jobs and Economy

If it'll create additional employment and if it'll be practical to serve all the islands or a portion of them. After all it'll be expensive to buy the cables. Maintaining it afterwards will be hard. We have rough waters as opposed to Japan or other countries because of currents.

If it would be something to help the economy of the state, I would be in favor of it.

As long as take care the local people. They should get the jobs first.

6. Environment

Would the plant be safe in that location? If so, okay. What would it do to the environment?

Good if it doesn't endanger anyone or anything. If they have a proven way of handling any problems with the cable. I would not want the environment or any people or animals to be in any danger from the damage of that cable.

If there is no danger to anyone and we don't stockpile any waste I'd be for it. I don't know enough to make up my mind now.

I would need more information before I could decide. Will it lower the cost? And what is most important, what will it do to the environment?

If it doesn't hurt the island and cause damages to the environment. It'll take a lot of time and effort.

I don't oppose anything if it benefits the Big Islandor our other islands. If we can help our neighbors, I think it's wonderful. I just hope it's not too noisy and hope there aren't residents nearby.

If the people living in that area aren't bothered by the fumes, then it's alright.

Depends on the amount of land being used.

As long as the environment is safe. The only thing negative about it is that it will be in the forest. What's the environmental impact? Will it be clean energy? Is it safe? It's all natural isn't it?

A lot of things. For instance: I'd have to know if it would be good or bad for the community. Well, it would be good provided it doesn't affect the people who live in or near the area. Noise, stuff like that, and it would be good if the cost were kept down because they would not need to purchase fuel, and it would be good if some people got some jobs. It would be bad if people had to move for some reason or it wasn't safe or wasn't good for the environment or the price went up.

Not upsetting the environment and if this can be avoided then I'm for it

7. Other Reasons

I need more information for example: how is going to affect us? What is the cost of it, is it safe, especially the underwater cable? Maintenance - what's the cost of it. I really need more information but it seems like you just cannot get enough.

8. Sharing Resources

We should send them the excess. Don't produce just for them, just send them the excess.

Is it for the whole state or just Oahu. It should be for the whole state or just us.

It's okay to build in the forest reserve because that's not private land and it would be for everyone. But the part built on private land should not be built if the people that live there do not want it there. What is built on the reserve is for everyone and should be used by everyone.

If it doesn't take anyone's land or pollute the air, I wouldn't care. But only if we have enough power for our island first.

If there is sufficient energy so we can send it to Oahu, then I think we should do it. If it doesn't create a problem. Anything that will benefit the people I'm in favor of. We should help our neighbors.

VERBATIM RESPONSES

RESPONDENTS FROM THE PUNA DISTRICT

GEOTHERMAL ELECTRICITY FOR BIG ISLAND (25 Megawatts)

The Hawaiian Electric Light company (HELCO) says that by 1990, the Big Islandwill need a power plant that produces about 25 megawatts of electricity just to fill the needs of Big Islandfamilies and businesses. The needed electricity would be produced by building two geothermal plants on 12 acres near the existing geothermal power plant in the Kapoho area. Are you generally in favor or opposed to the idea of producing geothermal electricity in Puna for use by Big Islandfamilies and businesses?

In Favor

1. Need

   The Big Islandis growing and we're going to need it, and it will be less expensive if it's produced right here.

   We need power and a better economic base for Hawaii.

   Because then more people will have electricity.

   If it would help this island to produce more power, OK.

   Maybe some other people need something, but I have enough, but you can make it for them.

   That's what we need so we might as well go for it

   They (geothermal wells) give off electricity and we can use that electricity.

   It's okay with me - they need the power here.

   It's needed. Something has to be done to provide energy for people.

   I'm all for it and besides where else are we going to get it. We need energy that's just it.

   For me personally and the people. We need it to help the high rates, to help people to have more power. Some families on the Big Islandhave to have their own generator.

   'Cause I think we need it. Geothermal wells, that's the cheapest there is isn't it?

2. Alternate Energy

   I'm in favor as it (the power) is here. Harness it and electricity will probably be lots less expensive. In the long run, electric bills should go down.

   It's a resource we need to develop for the economy and also we need the jobs here.

I'm very much in favor because we have the natural energy inside the earth. Why not use it. The wells will make less pollution than oil.

The potential is there - we might as well use it.

I find it a very good source of alternate energy. It's easy to develop and a real good potential for energy. Also that energy that's available will promote business. Wind energy does take up a lot of space I've liked what I've seen at Kapoho.

The resources are here and might as well use them. It will make jobs for people. In spite of fears about acid rain we should still develop geothermal. But, I would like more information about the effects on farms, etc.

It's better for Hawaii if we make the electricity that way.

If it could be handled properly, yes, but in comparison to New Zealand we have a lot to learn.

I think it'd been a plus for the county to use the natural resources available.

Only because it's good to supply our own.

I have observed plants in New Zealand. They are economical and it's a good way to get power.

Hawaii needs to develop alternate fuel sources other than oil, although they should take into consideration polluting the environment.

I'm all for it. I think it would be a wise decision. Diversify, that's what we need.

I feel it's an alternate source of energy that should be utilized.

Think it's the only source we have here so why not use it?

In the long run, we'll come out ahead. We need some other form of electricity.

3. Oil

I think we're making a mistake of relying on imported when we could develop it here. It's short-sighted.

They can do the job without screwing up. We're at the end of our economic rope. And soon we'll be oil vulnerable. We need to generate energy and since we have the resource, go for it. We can't depend on the outside world, we need to do it ourselves.

We spend so much on oil from other countries instead of depending on ourselves - its senseless - we should be independent.

Because it will allow us to be less dependent on foreign oil imports and generate more jobs.

Oil is unreliable, and I don't want the same thing to happen like in 1974 If we can reduce our dependency on foreign oil fine. It would give jobs to people who need the jobs now.

The oil thing is really serious and it will be economically good for us here.

At least we save on the fuel cost instead of cutting all our trees, at least geothermal is natural.

The price of oil is very unstable and it's a necessity to have alternate sources.

We'd be more independent and won't have to worry about if oil prices go up.

Good cheap way of building, plus your dependence on oil is stopped, geothermal is the way to go!

Eventually we have to have that in case of a fuel crisis.

4. Cost

The more energy we have the cheaper the rates. That's all that I'm concerned with.

It's economical and doesn't cause any pollution.

If it was developed I should hope it would cut costs. Us Big Islandresidents pay a lot for electricity.

It will help Hawaii. It is cheaper and there's no foreign fuel cost. I think our (the Big Island's) power bill will go down.

Because it will save money.

It'll give me cheap electricity.

If the rates remain reasonable that's good, but even if they didn't I would tend to favor having the geothermal power.

I have a big family and my own business, so I'd appreciate it if the cost might be cheaper.

It saves money, then it would be cheaper. I don't see why not, if it saves money.

Because it'd produce electricity at a much lower cost and its there.

I live two miles from the plant. We could use the new power to bring the rates down, not line the corporate manager's pockets. We already pay $.15 per kilowatt hour.

It would mean lower electricity bills for the Big Island.

It'll cut electricity costs - that's all.

5. Jobs

I've lived here 75 years. It's a good idea because of the economy for one thing.

It will give more job opportunities to people on the Big Island. And produce more energy.

In case something else fails us and it would be more jobs for us too.

6. Environment

That's fine - good source of electricity - if they could clean the smell.

It's a good idea, but then I live in an area not affected by the smell of the plant.

We putting up with all the smell and the rubbish making so we should reap the profits.

I think geothermal is cleaner energy than some energy alternatives. But, could do something to clean up the air better than what they are doing.

7. Other

No particular reason, just sounds good to me.

Since there is a plant it may as well continue.

I don't know.

If it doesn't affect the employees of Helco, like laying them off. We need it for our economy.

Just what I think .. I'm in favor of it.

Good idea and I live by it - good for everybody.

I made a survey of this and this is my preference.

Opposed to Geothermal Development

4. Cost

Cost Senator Inouye has pointed out that it would be necessary to bring in heavy industry - the cost will be extreme and I don't want to get into that.

5. Jobs

The people feel that once they start producing electricity here there's going to be a huge influx of people ... Business ... Whatever they can make money with.

6. Environment

To me, the thing makes for not a safe place - like can ruin the TV - they exploded out here already - the steam company had to pay the TV repairs.

There hasn't been enough research so I'm not sure. It would depend, fumes might affect people who live near the plants.

The wind blows fumes into the village and causes asthma - people have landed the hospital - and there's been one death.

My neighbors and I got sick the last time they vented those wells. They vented - arsenic, mercury lead, sulfur dioxide, silica and radon gas. There may be more times but isn't that bad enough.

Mainly not enough people now and pollution.

It would be adverse to papaya farming - the fumes and such.

They haven't done enough research on health problems. We have a lot more chest problems and congestion since the plant was built.

I guess because of the pollution and things.

Alternate we're using all of our natural resources. Once its gone that's it. And once the geothermal plants are in we can't take them out again. An environmentalist said we had other alternatives than this and I agree with him.

Because -- I would rather not because the environmental consequences outweigh the need.

We have to get the fumes from it, the fumes are hazardous, they are running it cheaper than they should be and letting out the fumes.

All the residue effects - too much noise and smell. Kids get chest infections - (lives in Volcano village). We use generators here with diesel power and that works fine.

7. Other Reasons

They aren't going about it the right way. It is completely out of control

Have dubious feelings about electric companies and I'm not confident about the type of business that would be brought in. Somebody even said there would be mining and big industry, big dirty industry.

I'm against it 100 percent - yes. I have property there. Anyway, the Hawaiian Electric has been gouging - not treating people right. Hawaiian Electric is just not capable of running it. I can give you some examples: (a) for instance, they cut the power off just for pole work; b) not even two months go by without being cut off.

It Depends

4. Cost

Oh, I could be in favor if it was cheaper, but I'd be opposed if not.

On who's going to benefit from it. Who'll be in control of it? Helco? Are prices going to keep going up?

If it comes out cheaper in the long run.

I'm in favor if there's gonna be a reduction in our electric rate. If it's only going to make money for Helco, no.

5. Jobs

If it's gonna create jobs, I'd be for it. People are leaving the Big Islandbecause there are no jobs.

6. Environment

It depends on what kind of fall-out we're going to get from it. Everyone wants cheap electricity but whose going to bear the burden ... This is a pretty residential area.

On what damage it's going to do to the environment - if it will lower the rates, then okay as long as the land is okay. If not, the price is too high.

If they can clean up the air, and get the government involved.

If the well were situated away from the populated areas. It's bad on my asthma. If the county was more directly into it.

If they keep enough distance away from residential areas because of the smell and the noise.

I'm paying for fuel when I'm using geothermal now - change the laws first! Otherwise okay, but would prefer they put the wells on some other island or fix it so that it doesn't stink.

I am concerned of the quality of life - health reasons. Emissions from the wells, especially in leilani estates.

7. Other Reasons

If sanctions on the running of the geothermal plants is done correctly.

I don't care either way.

GEOTHERMAL ELECTRICITY FOR BIG ISLAND ONLY (100 MEGAWATTS)

Another plan would end up producing all Big Islandpower from geothermal wells. To do that would require about 100 megawatts of electricity. That would mean building several geothermal power plants on about 200 acres in the Kapoho area, and further up in the Puna Forest. Are you in favor or opposed to the idea of producing geothermal electricity in Puna to produce all the power used by Big Islandfamilies and businesses?

In Favor

1. Need

   It's right that we supply the electricity if we can do it. More people are moving over here. We should make Hawaii grow.

   In the future it will benefit the people of Big Island.

   I'm all for it and besides where else are we going to get it. We need energy that's just it.

   We have all barren land here anyway.

   Good idea - same reasons and can build more homes there, if they had electricity.

   Because I think we need it and that's the cheapest there is.

   At the moment I know some people are without electricity especially in the Kalapana area.

   It's needed. Something has to be done to provide energy.

2. Alternate Energy

   In the long run, we'll come out ahead. We need some other form of electricity.

   Use the whole field for geothermal - plenty of room and power for everyone.

   The power is there for us to use, we should use it.

   Same reasoning, so far as we know this is the best area for the ability to drill. It's more accessible. Close to Hilo. This seems the best place it's sparsely populated and the smell is not objectionable to me.

   It's the only source we have so why not use it.

3. Oil

Need to develop alternate fuel needs other than oil. Although they should take into consideration of the polluting of the environment.

Hoping to be more or less independent so won't have to depend on outside sources like OPEC.

Eventually we have to have that in case of a fuel crisis.

Because it will allow us to be less dependent on foreign oil imports and generate more jobs.

4. Cost

It can save us all a lot of money. We need the electricity so maybe it would be cheaper.

It should be okay if they can do it without raising our taxes.

As long as I don't have to pay for fuel or their Mickey Mouse stuff like drilling and poles (paid $1,000 each for poles).

It's okay with me if it keeps the cost down.

5. Jobs

It's cheap, available and will serve our needs. It'll help the economy where we won't have to depend only on the government or tourism. It'll also broaden the economy to the point of being able to export it.

I have participated in studies on geothermal and we need this to create jobs and help our economy.

Still favor, anything that will help the community.

Sounds good from the point of the economy. We should work toward getting our own power.

Economy main thing and more people coming in all the time.

Well the main reason it might be in the Puna area out here is where the people need jobs.

6. Environment

It's a good idea, but then I live in an area not affected by the smell of the plant.

Important: as to the where and what endangered species must be protected. Have to look into developing all we can. Know there's a sulfur smell but very positive to what I've seen. Land not much good so real good potential.

If it doesn't hurt the air, that's my concern. Otherwise I see it as a good source of power.

I think the companies should make it attractive, keep it aesthetically pleasing. They can do a lot of things if they have a mind to. It can do a lot with the smell too and they should.

As long as it's not going to affect anybody personally.

Yeah, if they can do it without ripping up the environment.

There aren't many residents living there, so I don't see why anyone would mind.

7. Other Reasons

It'd be better for everybody.

It doesn't matter.

I'm in favor of it.

Everyone benefits from that.

As long as it's operated properly from engineering right on down the line.

That place is a waste land and they should use it for something other than growing pakalolo. We can't even go in there because they'll shoot you to protect the plants.

Sure I'll go for that. I think its a good idea.

Just sounds like a better idea.

Opposed to Geothermal Development

2. Alternate Energy

Not as sole power source - have fuels as a back up.

I'm also in favor of wind generation. It's not the answer to all our problems, either one.

Use other sources of energy instead! Don't put all your eggs in one basket.

4. Cost

In the beginning it will cause pollution and I just think it's gonna cost a lot ... The people over here can't afford it.

I don't live in the Kapoho area. If it were for Puna (the 100 megawatts) I wouldn't mind because the cost would be cheaper.

6. Environment

We're using up all of our natural resources. Once that is gone that's it. Once the geothermal wells are in we can't take them out again. An environmentalist said we had other alternatives than this and I agree.

Too much power especially up around the volcano area. I'd be opposed if they overdevelop the place. This is Hawaii and we should keep the scenery.

They haven't done enough research on the health problems. We have a lot more chest problems and congestion since the plant was built.

Take up too much land space.

Stink - smell is noxious. Emissions are bad - we don't know what the effect will be on the health of our children.

Same reason but more so - when the volcano vents sulfur the kids get sick. Pele is not happy about us digging holes and these eruptions are to keep us out of there.

Preservation of the forest.

Not in Puna - we need the forest for rain and birds there.

I'd rather preserve the forests. If they start building geothermal plants tney'll cut trees.

I would be opposed until they know how it will affect our health. If the fumes weren't so bad, but I can't breathe when they vent the wells.

Health is reason enough. Go for non-toxic alternatives. Produce it by wind or solar.

Health reasons.

Environmental consequences and geothermal is not the way to produce.

Drilling all over will affect the lava flow pressure and mess up the land. Will cause more eruptions.

7. Other Reasons

With some limits. We can't just expand without thought. It requires further study before they get too big.

Not too sure as we need more information and more facts.

It's who produces that power again - other sources better. Which could produce in a way not gauging. Doubts about present company.

If I'm opposed on a lower level, I'm still opposed.
I don't know why.

Don't think it can be done. Not enough steam in the earth. Just waste time digging more holes.

Because they presently have wells dug and need to use the wells they already have, further wells would require more space.

As long as they don't clean up their act, I oppose it.

8. Share Resources

It should spread out all over the island ... I don't think that the Puna area should produce it all.

I'd rather not build them in Puna. We have one already and that's enough

It Depends

1. Need

I'm in favor of them lighting everybody's houses here. I'm opposed to them producing more electricity than they need. I mean I'm sure they can find a need but will it be to everyone's benefit.

How much energy they can put out. If enough, them do it.

3. Oil

If it would decrease the dependence on foreign oil but it needs to be handled properly.

If it's cheaper in the long run to use - cheaper than oil.

4. Cost

If it would be economical, but I can't see that happening with HELCO involved.

One thing would cost the tax payers to put in, but would make more jobs.

If it's gonna favor the consumer yes .. If it only profits HELCO, no.

On the cost of building this set-up.

5. Jobs

If it creates more jobs in Puna.

6. Environment

If they can take care of the air defects and produce cleaner ways to operate the plant.

Who'll control it? The Kalapana people go hunting in the reserve. How will they do that?
Perhaps Leilani Estates might be bothered because of the fumes.

Need to have more information like how close to populated areas and what effect on the wildlife.

It would depend on where they put the power plants.

I'm concerned about what the effects are on the environment - and if it looks ugly (the plants) I don't want that either.

I am for it if strict control is put on running of the plant and environmental control is closely watched.

I feel that in consideration of Puna residents we should check out alternate sites but if its all there is ... The smell and noise ... Pollution ...

7. Other Reasons

I would want to know more about this energy source first - so much emotional stuff is going on and we need facts. I'm not sure.

One step at a time. If everything is okay then let's go for the 100 megawatts. Don't jump the gun. Right now it's ridiculous to go for the 100 when we haven't gone for 25 megawatts.

If they can do it safely.

I'd want to have another look at that, I believe it better to go a step at a time.

I would approve of that but we have to see more impact study on geothermal wells. As for a prototype goes, it would be bigger than the one now, and the next one would be even bigger.

Haven't thought about it extensively way. Would depend on how, when, where.

GEOTHERMAL ELECTRICITY FOR EXPORT TO OAHU (500 MEGAWATTS)

The Big Islandcould produce geothermal electricity to send to Oahu by an undersea cable. Work might begin in the late 1990s and be up to 500 megawatt capacity after the turn of the century. At least two geothermal sites would be needed--each on several hundred acres. One might be in the Kapoho area, the other in the Puna Forest Reserve. In general, would you say you favor or oppose the idea of the Big Islandmaking enough electricity to send to Oahu?

In Favor

1. Need

   Because of their large population they would require outside sources of energy.

2. Alternate Energy

   There's enough power in the earth to supply the whole island easily.

   If it's there why not use it. In my opinion it's the cleanest energy. Wind energy is not a viable source of electricity.

   I don't want it right next to me but we do need alternate fuel needs other than oil.

   I would like to be self-sufficient. It would be great if Hawaii could produce all of it's own electricity.

3. Oil

   The fuel won't last forever so we need an alternate for oil.

4. Cost

   So long as the citizens can some how share in the revenues from the energy produced for Oahu, in a financial remuneration.

   It would make our power cheaper still. Oahu would pay for some of our cost. If we make that much electricity, it should get cheap.

   Anything we can produce cheaper by our own environment we should do. We pay too much for transportation costs now.

5. Jobs

   Well, since everybody's future economy is helped.

   Anything to encourage economic growth, I am a farmer and any thing which helps to control environmental control without messing up the environmental structure is okay with me.

Because it will make more jobs.

To create more jobs we need the geothermal.

It's pretty doubtful they can lay a cable, but it would supply more jobs and we need to boost the economy. It provides jobs too.

If we have the resource here and it will create new jobs for us - why not use it.

6. Environment

We need to get alternate source.I live here and it depends on environmental reasons.

Provided we can keep the environment from being ripped up and if its feasible.

It's a good idea, but then I live in an area not affected by the smell of the plant.

It's okay if it isn't dangerous and then I hope they will do something about the smell.

7. Other Reasons

Sounds like a good idea.

I'm in favor of it.

I'd be all for it.

I don't really know. It just sounds like a good idea to me.

I made a survey of this and this is my preference.

I don't think they have the technology to send the power to Oahu. I probably won't be here to care.

Don't care - just moved here and really haven't thought about these things.

8. Share Resources

Well, the whole island would get help and Oahu, too.

We should help the other islands if we can.

They have no place to have the wells on Oahu. I guess we should help them too.

Oahu needs more power.

Oahu is going to need it and we have the space - it'll produce jobs for a lot of people.

It would improve the economy of the whole state - we are all one state. Not separate! We need to be independent.

I've been very positive right through. I assume people in Honolulu pay much higher amounts for their electricity too. Probably it would best to take care of both our needs as long as it will cut costs.

I don't see why we can't transport it to the other islands.

How come we can't to send it to Oahu. If they need it that's it.

Just because some people complain about the smell or whatever is no reason to deprive the rest of the population .

It's progress isn't it and it should be shared by everyone. We need to think of other ways for energy.

Opposed to Geothermal Development

1. Cost

On the cost of pulling the cables and how much power they will take from us.

Sounds like it would get too expensive in the long run. I'm wondering if Hawaiian Electric would run it. That would make it expensive.

All thast probably won't affect me, but I feel its too expensive and too far fetched.

Not unless we got a break out of it.

5. Jobs

Its good to share, but that's where we do our hunting area for food - we don't have jobs. What would this do about jobs for us? How many jobs can these plants give us? I think they should use the ocean instead.

6. Environment

It would make a big problem worse. Some of my neighbors have sold their homes and I don't want to move. We came here from honolulu for the clean air. I hope this geothermal business closes.

I sure like to keep hawaii over as more of a tourist attraction. Overcrowded and overdeveloped, too industrial. Already it's getting like that.

I have reservations because of the size of it. You have to consider volcanic eruptions too, wiping it all out.

How come they keep building just because to get all the power to give from here to there. Volcanoes erupt and flow anyplace, I don't understand but unsafe. Just average now, but later cut more trees and no water.

Health reasons, smell and noise. Let Oahu find another source of power: maybe solar.

Hawaii is growing and I know Oahu needs power. Right now I'm not sure how dangerous it is. I think we need to know more.

They should inform us of the health hazards. We moved to the country to get out of the city and its smells.
Technology. It's not advanced enough to move the electricity. Even the nodules they speak of will have toxic tailings and they expect to wash it all out to sea.

Opposed because of environmental impact to the sea, what would happen to the ocean life.

Oppose again mainly due to pollution and preservation of the forest.

Not in the Puna forest.

Not the way they do it in the present times, some times fumes are so bad that you can barely breathe.

7. Other Reasons

No particular reason.

I don't think it can be done, because the people in charge over here do not know what they are doing. The plant has already exploded two times already.

I have no idea.

8. Share Resources

Because my property would be devalued. At the same time I realize geothermal has great potential, but it needs to be used in a sensible way. There's nothing to benefit us (people in Puna). We'd have to put up with the noise and water contamination for the benefit of Oahu.

Let Oahu make their own. They don't like us anyway.

It sounds good in theory, I'm not up on it enough to know if they have the technology to build this giant extension cord anyway. I think they'll be bringing Oahu over here. Oahu is a little overcrowded. I think they'd be better off to send the people over here, here you have vast areas of nothing. I'm not saying we'd be better off.

If we're going to make it here and send it to Oahu it sounds like a defeated thing. Provide for this island and let them find their own.

If they can't bring the rates down here, why should we supply Oahu? In other words, take care of us first.

I think we should take care of our own .

Honolulu should take care of themselves.

First place Oahu is different than we are. They're overbalanced. It would aid in the overdeveloping the oahu area more ... They got enough problems as it is. I think garbage energy is their bast bet and windmills. We're the poor cousins here. If they're going to get electricity they should get there own way besides the expense of laying the cable under water is going to be a great expense.

Don't let Big Islandbe used as a power generating plant for the cancerous growth in Oahu!

Because sending energy to Oahu would mean more generators, more noise, more smell and rubbish. Why should they use the power we have to make and suffer more of the discomforts it brings.

Why should we supply Oahu with electricity?

We have to pay for it and then they get the electricity.

We won't suffer for Oahu. They could get it from the sun and wind power.

They've got enough resources of their own over there.

Rather we serve our purposes first.

Oahu has too many homes. We shouldn't or just can't be expected to supply them the energy. I'm sure they can figure something out for them.

No benefit to Big Islandby sending it to Oahu.

It Depends

4. Cost

Will our rates come down?

Who will be paying for it and if the forest reserve should remain a forest reserve. There are other places to build a geothermal plant.

If they do have enough power to send to Oahu and the cost is cheaper.

If the power would benefit the Nig Island community in ways such as lowering electric bill cost at present.
I'm in favor if there's going to be a reduction in our electric rate. If it's only going to make money for HELCO, no.

5. Jobs

If it can be proven it's good for the economy, I would favor it.

If it doesn't pollute our clean air, I'm for it. It'll bring money for our island. The people complaining are transplants from the mainland who don't care about Big Islandeconomy.

6. Environment

On effects of emissions on farms and people. But the cable is a good idea and don't mind sharing with other islands.

Like to see how it affects Big Island first.

If it meets the safety conditions and doesn't jeopardize farming, I would favor it.

If we could do by preserving our Puna area, it would be okay. Puna should not turn into an industrial park.

I'm concerned about the effects on the environment - and if it looks ugly (the plants) I don't want that either.

I don't object but I want to see how they do with the smaller plants. Will they really make the buildings aesthetically pleasing. Will they really do something about the smell. Once they prove they will do all of these things, I would say "go ahead."

7. Other Reasons

Well that would depend on whether it is harmful. Maybe that is getting too big. I haven't thought about this part of it.

The main thing is if HELCO controls it, the people lose. If the state controls it the people will benefit.

One step at a time. They have to improve efficiency first. If it proves to be good then go for it. The smell would just be something to put up with. That's the trade off. But like I said one step at a time. Right now it's prudent to go for 25 megawatts.

Oahu is not that kind of island to hold geothermal energy. If they prove it's not detrimental to the environment or to us then they can work it out for all the islands. Sending energy to them that is. But right now, I don't appreciate it, and I don't think many people would. They really need to give more information to us.

If they think they can run a cable under the ocean, I may go for it. Have reservations again, acquisition and power.

Great idea but need more information again.

Cannot do it too fast - have to think about it more.

8. Share Resources

If they didn't send all the electricity to Oahu. I mean, it's our plant!